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AUTHOR Brawer, Florence B.
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ABSTRACT

A literature review explored answers to questions about the relationship between the business world and entrepreneurship education, including the question of whether models of reality actually mirror real-life situations. The review showed that between 1979 and 1994, entrepreneurship education grew phenomenally, whereas business education did not experience such growth and did not change to stay relevant to the current business world. It was suggested that computer simulation in entrepreneurial education could alleviate problems of business education stagnation by offering both situational approaches and theoretical models. Based on real-life situations, gaming and simulation approaches help students formulate their own ideas about engaging in an existing business or creating a new venture. Two types of business simulations, models of reality, exist: one is computer-based and the other is behavior-based. Computer simulations can provide insight and skill practice that later can be translated into real life situations. At the same time, simulations are not an answer for everything. They are not meant to replace conventional methods of instruction but to augment them, and they cannot be too realistic in order that students not be confronted with too many issues, problems, or situations at once. They should be part of a larger process of entrepreneurship and business education. (KC)

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Kauffman Center for Entrepreneurial Leadership
4801 Rockhill Road
Kansas City, MO 64110-2046
(888) 423-5233

# Digest

**April 28, 1997** **DIGEST Number 97-1**

## Simulation as a Vehicle in Entrepreneurship Education

By Florence B. Brawer

What is the relationship between the business world and entrepreneurship education? Do models of reality actually mirror real-life situations? This CELCEE Digest explores answers to these questions by citing a number of articles that have been abstracted for the CELCEE .

### The Limiting Nature of Business Education

Entrepreneurship Education has seen exceptional growth. This is demonstrated by the fact that from 1979 to 1994, "the number of American postsecondary schools teaching entrepreneurship or its related courses have more than quadrupled to over 1000; the number of journals grew from 2 to 21; and the number of endowed positions in entrepreneurship and related fields grew from less than 10 to more than 120." (Katz, Gundry, Low and Starr, 1994 p. 335). On the other hand, business education has not experienced such growth. Indeed, it is often castigated because from 1960 to about 1985, it did not change, it is currently not relevant to the business world, and it is too loaded with theoretical blunders.

### Simulation as One Solution

Computer simulation in entrepreneurial education can alleviate many of these problems by offering both situational approaches and theoretical models. Although these gaming/simulation pproaches to entrepreneurship education confront many of these problems, Porter (1994) warns that simulation proponents should not become overly confident about meeting contemporary challenges. At the same time, he believes that gaming/simulation and experiential approaches do have the potential to make major progress in entrepreneurial education. Based on real-life situations, they are used to help students formulate their own ideas about engaging in an existing business, or creating a new venture. Here participants are able to consult with actual entrepreneurs who evaluate their performances.

Interactive Planning (IP), a visionary technique developed by Ackoff (Ackoff, Finnel and Gharajedaghi, 1984), and successfully used by such large firms as Anheuser-Busch and A&P, is creative, flexible, and based on "live cases." It adapts readily to changing environments and prepares students for idealized design steps in interactive planning according to a specific time schedule. The class exercises are explicated: informing the class, starting a field work site, identifying stake holders, forming teams, and gathering data. (Robbins, 1994).

Using a simulation methodology to ascertain how specific entrepreneurship strategies cope with changes in business environments, Lant and Mezias (1990) explore the effectiveness of several entrepreneurial strategies in established organizations that are faced with fundamentaly restructuring their environments. Conceptualizing entrepreneurship "in light of a perspective which regards organization or learning systems" (Lant and Mezias, 1990 p. 147), its fundamental contribution lies in recognition that organizational change can be simulated in terms of an experiential learning process.

### Models of Reality

Two types of business simulations, models of reality, exist-one, computer based and the other, behaviorally based. As experiential learning models, computer based simulations provide environments wherein participants experience realities of the business world that are risk-free and are specifically designed to "eliminate certain costs and extraneous details inherent in the typical manager's operating environment." (Feldman, 1995). These computer-based simulations also offer sufficient insight into the actual operations of a business so that participants can later transfer the simulation model strategies into real-life situations. Further, certain attitudes and behaviors that are consistent with success can be aquired and enhanced. Total enterprise simulation games seem to lend themselves well to the development of such attitudes and behaviors through practice and constant reinforcement. These technologies provide not only immediate feed-

back on decisions to the participants but also offer accelerated actn frames and positive peer pressure to succeed. They also have the potential to provide students with opportunities to practice and develop evaluation skills.

**Limits of Simulation**

At the same time, simulations are not an answer for everything. They are not meant to replace conventional methods of instruction but where possible, to augment them. In particular, simulation/game authors must examine the developmental process of entrepreneurship and find more efficient and effective ways to model the total creative process. Until the gap closes, maintains Feldman, simulation will remain an important but underused technique in the entrepreneurial classroom.

Wolfe and Bruton (1994), who analyzed three computer simulations, also introduced certain caveats. Evaluating each of the three on specific criteria (including whether the simulation actually accounted for all aspects of running a small business), the authors concluded that although simulations have great potential for entrepreneurship training, they are relatively few in number and limited in their ability to cover topics typically offered at the collegiate level.

Still another concept is introduced by Low, Venkataraman and Srivatsan (1994) who argue that although students may learn through simulating actual experiences, computers cannot and should not be too realistic. Realistic simulations may create frustration for students who would face many random events beyond their control. Low et al developed an entrepreneurial game because they felt that although traditional pedagogical methods (lectures, reading, etc.) are crucial in developing analytical skills, they "are limited in their ability to engage a student at a visceral level." (Low, Venkataraman and Srivatsan, p. 384). Experiential approaches may increase motivation, providing students with opportunities to explore the "emotional and interactive dimension of entrepreneurship." (Ibid). They can also complement other methodologies, test theories, and manipulate conditions under which the game is played. Indeed, these authors view entrepreneurship as mobilizing resources in pursuing opportunities. They see th process as a competition, a tournament that has both winners and losers.

The entry researching game developed by these same authors was built upon several criteria and is designed as part of an MBA course. Usually played over a 5 to 10 day period, outside class, the exercise includes an introductory session, the actual playing of a game, a debriefing game, and an evaluation. An example of a research study using the game is also included in their report.

**Discussion: Simulation is Only Part of the Solution**

The publications cited here all present certain responses to the questions posed earlier. There is a relationship between business and entrepreneurship education, although entrepreneurship stresses certain variables (e.g. opportunity recognition) not emphasized in the typical business course. Simulation is used fairly widely but it should be considered a method, a medium, rather than an end in itself. And it cannot be wholly realistic in order that students not be confronted with too many issues, problems, or situations all at once. Therefore models of reality should not actually mirror real-life situations. In sum, simulation and gaming serve a purpose in promoting entrepreneurship education, but they should be seen as parts of a larger process.

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